

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Currently Amended) Apparatus for applying powder to at least an interior surface of a hollow object, the apparatus comprising:

a powder discharge device adapted to receive powder and discharge the powder through an outlet;

an object holder configured to hold said object such that said outlet is positioned within the hollow object adjacent the interior surface; and

a rotating mechanism configured to engage and rotate the hollow object about an axis of rotation such that powder discharging from the outlet coats the interior surface as the interior surface rotates past the outlet, wherein the outlet is oriented to discharge the powder in a direction transverse to the axis of rotation and normal to the outlet[.];

wherein said powder discharge device further comprises a chamber, and said outlet is positioned in an upper portion of said chamber, said chamber adapted to receive and fluidize a bed of the powder to form a powder cloud discharging through said outlet.

2. Canceled.

3. (Currently Amended) The apparatus of claim ~~[[2]]~~ 1, further comprising:

a porous member positioned at a lower portion of said chamber below the bed of powder and having an upper side facing the bed of powder and an opposite lower side;

an electrostatic charging device positioned in an air flow path leading to said lower side of said porous member; and

a pressurized air inlet for directing pressurized air into said air flow path such that the air is charged by said electrostatic charging device and then passes respectively through the lower and upper sides of said porous member and into the bed of powder.

4. (Original) The apparatus of claim 1, wherein the hollow object includes an exterior surface and said object holder further comprises a pair of rollers configured to engage generally opposite sides of the exterior surface, and said rotating mechanism further comprises a motor coupled to at least one of said rollers.

5. (Previously Presented) The apparatus of claim 1, wherein said outlet further comprises an elongate slot configured to extend parallel to the axis of rotation.

6. (Original) The apparatus of claim 5, wherein said powder discharge device includes a chamber and said elongate slot is formed between converging walls of said chamber.

7. (Original) The apparatus of claim 1, further comprising:

a transfer mechanism coupled to said powder discharge device and operative to transfer said powder discharge device from a position outside the hollow object to a position within the hollow object.

8. (Previously Presented) Apparatus for applying powder to at least an interior surface of a hollow object, the apparatus comprising:

a chamber having an upper portion, a lower portion, and inclined walls converging in a direction from said lower portion toward said upper portion;

a powder fluidizing bed disposed at said lower portion of said chamber and adapted to receive and fluidize a bed of the powder to form a powder cloud emanating upwardly from said lower portion, through said converging area to said upper portion of said chamber;

an outlet positioned at said upper portion of said chamber and configured to direct at least one stream of said powder from said powder cloud out of said chamber, said outlet positioned at a location between said inclined walls;

a powder collection unit positioned to collect excess powder which has not been applied to the object;

an object holder configured to hold the object such that said outlet is positioned within the hollow object adjacent the interior surface; and

a rotating mechanism configured to engage and rotate the hollow object such that powder discharging from the outlet coats the interior surface as the interior surface rotates past the outlet.

9. (Original) The apparatus of claim 8, further comprising:

a porous member disposed at said lower portion of said chamber below the bed of powder and having an upper side facing the bed of powder and an opposite

lower side;

an electrostatic charging device positioned in an air flow path leading to said lower side of said porous member; and

a pressurized air inlet for directing pressurized air into said air flow path such that the air is charged by said electrostatic charging device and then passes respectively through the lower and upper sides of said porous member and into the bed of powder.

10. (Original) The apparatus of claim 8, wherein the hollow object includes an exterior surface and said object holder further comprises a pair of rollers configured to engage generally opposite sides of the exterior surface, and said rotating mechanism further comprises a motor coupled to at least one of said rollers.

11. (Previously Presented) The apparatus of claim 8, wherein the rotating mechanism rotates the hollow object about an axis of rotation and said outlet further comprises an elongate slot configured to extend parallel to the axis of rotation.

12. (Original) The apparatus of claim 8, further comprising:

a transfer mechanism coupled to said chamber and operative to transfer said chamber from a position outside the hollow object to a position within the hollow object.

13. (Previously Presented) Apparatus for applying powder to at least an interior surface of a hollow object, the apparatus comprising:

a first chamber having an upper portion, a lower portion and an outlet in said upper portion;

a powder fluidizing bed disposed at said lower portion of said first chamber and adapted to receive and fluidize a bed of the powder to form a powder cloud emanating upwardly from said lower portion to said upper portion and through said outlet;

an object holder configured to hold the object such that said outlet is positioned within the hollow object adjacent the interior surface;

a powder collection area positioned outside said first chamber;

a rotating mechanism configured to engage and rotate the hollow object about an axis of rotation such that powder discharging from the outlet coats the interior surface as the interior surface rotates past the outlet, wherein the outlet is oriented to discharge the powder in a direction transverse to the axis of rotation and normal to the outlet; and

a powder collection unit connected in fluid communication with said powder collection area for collecting excess powder which has not been applied to the object.

14. (Original) The apparatus of claim 13, further comprising a second chamber positioned below said first chamber, wherein the hollow object includes an exterior surface and said object holder further comprises a pair of rollers mounted within said

second chamber and configured to engage generally opposite sides of the exterior surface, and said rotating mechanism further comprises a motor coupled to at least one of said rollers

15. (Original) The apparatus of claim 14, further comprising:

respective powder removing devices within said second chamber and operating to remove powder from said rollers for subsequent collection by said powder collection unit.

16. (Previously Presented) The apparatus of claim 13, further comprising:

a transfer mechanism coupled to said first chamber and operative to transfer said first chamber from a position outside the hollow object to a position within the hollow object.

17. Canceled.

18. Canceled.

19. Canceled.

20. Canceled.

21. Canceled.

22. Canceled.

23. (Previously Added) The apparatus of claim 15, wherein said respective powder removing devices further comprise a nozzle oriented to direct positive pressurized air toward the corresponding one of said pair of rollers.